

A high-level monthly briefing on operations and activities at the U.S. Department of Energy's Idaho National Engineering and Environmental Laboratory – Home of Science and Engineering Solutions. Work at the lab advances the Department's strategic goals in the areas of energy, environment, defense and science.

---

## ■ ENERGY – INEEL Lab Director Joins International Nuclear Power Effort

Paul Kearns, laboratory director of the INEEL, joined his peers from six other Department of Energy national laboratories, and several Russian research institutions, in Austria recently to develop a joint document that advocates greater global use of nuclear energy. The document says its developers believe that of all current or imminently developable energy technologies, only nuclear power is capable of meeting the growing world demand for safe, clean, plentiful and economically viable sources of electricity, fresh water and hydrogen. “With government encouragement and the right regulatory and economic conditions, nuclear energy could supply a substantial part of U.S. and Russian energy needs and 30 to 40 percent of the world electricity demand by 2050,” the document adds.

## ■ ENVIRONMENT – Researchers Confront Challenge of Capturing Carbon

Two late-month meetings on carbon sequestration attracted top carbon sequestration researchers and speakers to University Place in Idaho Falls. The INEEL and the University of Idaho co-hosted the DOE-HQ Big Sky Regional Carbon Sequestration Partnership meeting Aug. 24–26, and the American Society of Mechanical Engineers Carbon Sequestration Symposium was held the afternoon of Aug. 26. Participants at the events discussed a variety of topics, ranging from terrestrial and geologic carbon sequestration of greenhouse gases to a Geographic Information System database to collect information on potential carbon storage sites.

## ■ DEFENSE – Key Homeland Security Test Center Opened

The U.S. departments of Energy and Homeland Security opened the United States Computer Emergency Readiness Team (US-CERT) Control Systems Security and Test Center at the INEEL Aug. 19. The test center is a key part of a national Department of Homeland Security initiative that focuses on enhancing the security of computer-based control systems that support America's critical infrastructure operations. Located in Idaho Falls, the test center allows control system stakeholders, such as utility companies and manufacturers, to identify and reduce control system vulnerabilities, help identify sector requirements, develop partner agreements and share information to support and implement design improvements. The test center provides stakeholders with relevant data and research facilities to support investment in enhanced control systems security.

## ■ SCIENCE – Idaho Research Garners International Recognition

INEEL researchers have once again had their work cited as among the world's top 100 technological developments of the year by R&D Magazine. The two winning teams for 2004 include 11 INEEL scientists and engineers working in extremophilic microbe research and environmental monitoring technology. The microbe research resulted in identification of an enzyme that allows more environmentally friendly industrial bleaching and product sterilization processes. The environmental technology work resulted in development of a unique probe that for the first time allows direct characterization and monitoring within or below hazardous waste sites. 2004 marks the eighth consecutive year INEEL researchers have received R&D 100 awards.

For more information, contact Brad Bugger at 208-526-0833